CalESCO CALIFORNIA EARTH SCIENCE CORPORATION

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Contract NAS 2-7698
MONTHLY PROGRESS REPORT NO. 21
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Fault Tectonics and Earthquake Hazards in the Peninsular Ranges, Southern California, EREP Investigation 463

NASA-Lyndon B. Johnson Space Center
Technical Support Procurement Branch
Houston, Texas 77058

Attention: Mrs. Ruth Elder, Mail Stop BB631 (B9)

Dear Mrs. Elder:

California Earth Science Corporation (CalESCO) is pleased to submit its 21st Monthly Progress Report on the application of Skylab imagery to analysis of fault tectonics and earthquake hazards in the Peninsular Ranges, Southern California under NASA Contract No. NAS 2-7698.

Summary Outlook

The principal plans for the immediate future are to continue analysis of images from SL1/SL2, SL3, and SL4.

Significant Progress

1. Digital enhancements of selected channels of S192 data can now be generated at JPL.
2. Work is progressing on conical scan corrections of selected areas, as well as on pseudocolor transformations.
3. Field studies of additional east-west and north-northeast trending lineaments in the Peninsular Ranges north and west of Ramona were accomplished. Evidence of faulting along one lineament west of Ramona was verified. Several other lineaments have been attributed to erosion along prominent joint directions.
4. Approval was received for additional processing of 192 data of the Mojave Desert, EREP Pass 2, for comparison of ERTS-1 MSS data of the same area.

5. Analysis of SL4 images of active faults in the Mojave Desert indicate that the S190B camera is significantly superior to the S190A camera for resolving geomorphic features related to recent faulting. Evidently the scale of these features, e.g. scarps, benches, and disrupted drainage is near the threshhold of resolution of the 190B camera system.
6. A summary of significant results of the EREP investigation was submitted to the Earth Resources Survey Symposium, JSC, June, 1975.

Expected Accomplishments, Current Month

1. Pseudocolor transformations of computer-generated test charts will be produced.
2. Work on current technical reports will be continued.
3. Field work will be continued on the east-west trending lineaments in the Peninsular Ranges.

Travel Summary and Plans

Several days will be spent in the field near Ramona and Alpine, California.

Very truly yours,

CALIFORNIA EARTH SCIENCE CORPORATION

Paul M. Merifield
Principal Investigator

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